

REMARKS

Claims 1-40 are pending in the above application. Claims 1, 2, 4-7, 9, 11, 13-17, 20, 22, 23, 26-28, 30-31 stand rejected under 35 U.S.C. §102 as being anticipated by Inoue, U.S. Patent No. 5,447,574. Claims 3 and 21 stand rejected under 35 U.S.C. §103 as being unpatentable over Inoue in view of Scheiter, Jr., U.S. Patent No. 5,161,557 and Rendemonti, U.S. Patent No. 3,891,149. According to the Office Action, Scheiter discloses rotary nozzles and Rendemonti discloses a piston pump which would have been obvious modifications to the device of Inoue. Claims 8, 12, and 24 also stand rejected under 35 U.S.C. §103 as being unpatentable over Inoue in view of Larson, U.S. Patent No. 4,949,423. The Larson reference discloses photoelectric sensors and an ultrasonic sensor to detect the vehicle which, according to the Office Action, would have been obvious features to include in the system of Inoue to render the identified claims obvious. Claims 10, 18, 19, 29, and 32 are rejected under 35 U.S.C. §103 as being obvious modifications of the system of Inoue. Claim 25 stands rejected under 35 U.S.C. §103 as being unpatentable over Inoue in view of Tamburri, U.S. Patent No. 2,981,266. According to the Office Action, the mobile cash washing system of Tamburri would have been an obvious modification to the Inoue device. Claims 33-39 stand rejected under 35 U.S.C. §103 as being unpatentable over Inoue in view of Scheiter because, as stated in the Office Action, the rotary nozzle of Scheiter would have been an obvious modification to the Inoue system. Finally, claim 40 stands rejected under 35 U.S.C. §103 as being unpatentable over Inoue in view of Scheiter and further in view of Tamburri. Again, the mobile structure of Tamburri, according to the Office Action, would have been an obvious modification to the combined teachings of Inoue and Scheiter.

Applicants respectfully traverse the rejections under 35 U.S.C. §102 and §103. Many substantial differences exist between the claimed invention and the cited references, either alone or in combination. In particular, the Inoue reference discloses an automatic car washing apparatus comprising a portal frame 3 that is movable relative to a vehicle to be washed. The Inoue reference is primarily concerned with

accurately moving an upper nozzle and side nozzles with respect to the vehicle body profile as recognized by a plurality of photo sensors arranged in the vertical direction on the sides of the portal frame. Importantly, "the vehicle body 2 is stopped at a specified washing position with respect to the portal frame 3". ('574 patent at Col. 9, lns. 30-31). The portal frame is then moved forward along rails by a drive mechanism wherein the photo sensors on the front surface of the portal frame detect the vehicle body profile. A vehicle washing sequence then takes place in the following manner: in a first forward operation of the portal frame detergent is scattered on the vehicle; in a first returning operation of the portal frame a water washing step is performed; in a second forward operation of the portal frame a water washing step is performed; and the drying step is performed in the second returning operation. ('574 patent at Col. 9, ln. 67 – Col. 10, ln. 8). Thus, the portal frame with the washing mechanisms reciprocates back and forth across a stationary vehicle under the control of a drive mechanism to wash, rinse and dry the vehicle. An "important object" of the Inoue reference is to accurately articulate the nozzles with respect to the vehicle body profile including raising or lowering the nozzles at high speed to eliminate any non-uniformity of washing while the profile of the vehicle body changes.

In contrast, the Applicants respectfully submit that independent claims 1, 13, and 26, and the corresponding depending claims, are novel with respect to the Inoue reference because the present claims and the prior art significantly differ. Independent claims 1, 13, and 26 are distinguished from the Inoue reference because each claim recites a stationary fluid application system for a vehicle driven by an operator, which the Inoue reference does not teach. In other words, the vehicle, under the control of a driver, is moved with respect to the stationary fluid application system. In this regard, the fluid application system of the present invention is particularly useful for applying asphalt release agent to asphalt delivery trucks prior to the trucks receiving a load of asphalt for delivery to a job site. Because the vehicles are driven by an operator under a fixed spray boom, the rate at which they pass through the fluid application system can vary. Hence, the vehicle detection signals in response to vehicle movement are under

control of the vehicle operator. The vehicle detection signal, thus, alerts the fluid application system that a vehicle is present under the spray boom. Because only the truck bed of the vehicle is desired to be sprayed with asphalt release agent, each of claims 1, 13, and 26 require that the system delay for a first time period during which time the spray unit is inactive despite the presence of a vehicle under the spray unit. Thus, in addition to the stationary aspect of the present system, Applicants traverse the suggestion in the Office Action that the Inoue reference discloses Applicants' claimed first time delay period. Thus, for at least the foregoing reasons, claims 1, 13, and 26 are novel notwithstanding the Inoue reference. In the same manner, independent claims 2, 4-7, 9, 11, 14-17, 20, 22, 23, 27, 28, 30 and 31 are novel in view of the Inoue reference.

With respect to claim 2, Applicants respectfully traverse the suggestion in the Office Action that Inoue discloses first and second fluid sources in fluid communication with the pump to communicate a mixture of the fluid sources to the spray unit. To the contrary, the Inoue reference discloses that each fluid source has its own associated pump and that the side nozzles 9a, 9b are connected to each of the pumps such that they can dispense the particular fluid or mixture of fluid contained in the associated fluid reservoir. For this additional reason, claim 2 is not anticipated by the disclosure of Inoue.

With regard to claim 4, Applicants submit that claim 4 is novel because that claim recites a plurality of nozzles at a first end of the boom supported over a detected vehicle which the Inoue reference does not teach. The citation to Column 4, lines 18-19 in Inoue does not support the rejection, as the side nozzles are not over the detected vehicle. Moreover, only one overhead nozzle is disclosed in the Inoue reference, which nozzle is moved laterally as the vehicle passes underneath the traveling frame.

With regard to claim 15, Applicants traverse the suggestion in the Office Action that the features claimed therein are disclosed in the Inoue reference. Again, with respect to the nozzle supported over the detected vehicle, no automatically variable fluid mixture ratio mechanism is disclosed in Inoue. The nozzles of the Inoue system spray detergent, water, or a pre-mixed ratio of water and wax to the vehicle being

cleaned. There is no teaching or suggestion in Inoue that the strength of the detergent or the ratio of the water and wax mix are modified in any way in response to the particular type of vehicle detected. Thus, for at least these additional reasons, claim 15 is novel notwithstanding the Inoue reference.

Similarly, with regard to claim 17, multiple fluid conduits are not disclosed or suggested in the Inoue reference for the nozzle located over the vehicle for spraying the variable ratio fluid mixtures of claim 15.

Regarding the obviousness rejections of claims 3 and 21, Applicants submit that the combination of Inoue, Scheiter and Rendemonti would not render obvious the Applicants' claimed invention because the references, either alone or in combination, do not disclose or suggest each and every feature of the claimed fluid application system. As noted above, independent claims 1 and 13, from which claims 3 and 21 depend respectively, recite several features not disclosed or suggested in the Inoue reference. In addition, Applicants submit that one of skill in the art would not be motivated to modify the device of Inoue to include the rotary nozzles of Scheiter because such nozzles provide a less accurate spray pattern. Rotary nozzles are desirable for broad area coverage. Hence, they are beneficial for spraying truck beds, for example, from a stationary overhead boom, as disclosed in the example of the present disclosure. Such nozzles, however, are not necessary or desirable in the system of Inoue because that system is primarily concerned with accurately directing the spray patterns to uniformly wash the vehicle under consideration. Rotary nozzles would be counterproductive to this objective and add unnecessary expense and complexity to the system of Inoue. Thus, for the foregoing reasons, Applicants submit that claims 3 and 21 are non-obvious in view of Inoue, Scheiter and Rendemonti.

With regard to claims 8, 12, and 24, Inoue only discloses a plurality of photoelectric detection means arranged vertically in the sides of the portal frame. No distance sensing mechanisms other than the contact sensors 54 are disclosed in the overhead position on the portal frame of Inoue. This is because the Inoue reference is concerned with raising and lowering the spray nozzles with respect to the vehicle

profile as seen from the side. In other words, Inoue attempts to prevent contact of the overhead nozzle with any portion of the vehicle. In contrast, the present invention is concerned with detecting and approximately locating the vehicle truck bed which may be several feet below the top of the vehicle side profile. Hence, the present invention claims an ultrasonic sensor to "see" the drop from the passenger cabin to the floor of the truck box. The photoelectric sensors of Inoue are more accurate for tracking the highest point of the vehicle profile as the portal frame passes over the vehicle. Using ultrasonic sensors in Inoue could result in the system contacting the vehicle if the overhead gantry believes it sees the "top" of the vehicle when, in reality, it is sensing a recessed vehicle feature. Hence, Applicants traverse the suggestion in the Office Action that one of skill in the art would be motivated to modify the Inoue reference in view of Larson to include ultrasonic sensors or a combination of photoelectric and ultrasonic sensors as claimed in the present invention.

With regard to claims 10, 18, 19, 29, and 32, Applicants submit that these claims are non-obvious in view of the Inoue reference because the Inoue reference discloses a different device directed toward solving a different problem than the present invention. Hence, no reason has been shown why one of skill in the art would modify the Inoue reference as the Office Action proposes. The Inoue reference is not pertinent to the problem of finding the bed of a truck for spraying the interior thereof as addressed by the present invention. Thus, claims 10, 18, 19, 29, and 32 are non-obvious in view of the Inoue reference itself, as the Inoue reference lacks any teaching, motivation, incentive or suggestion for modifying the device therein to arrive at the invention of claims 10, 18, 19, 29, and 32.

With regard to claims 33-39, Applicants submit that one of skill in the art would not be motivated to modify the Inoue device to include rotary nozzles for the same reasons as discussed above with respect to claims 3 and 21. Namely, rotary nozzles do not provide the accurate spray patterns desired by the Inoue device and are more appropriate for the fixed boom system contemplated by the present invention as opposed to the movable gantry system of Inoue.

RECEIVED
CENTRAL FAX CENTER

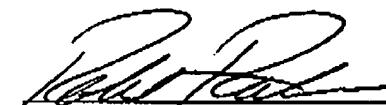
SEP 11 2003

OFFICIAL

In view of the foregoing amendments and remarks, Applicants submit that claims 1-40 are allowable. The Examiner is invited to telephone the Applicants' undersigned attorney at (248) 223-9500 if any unsolved matters remain.

Respectfully submitted,

ARTZ & ARTZ, P.C.



Robert P. Renke, Reg. No. 40,783
28333 Telegraph Road, Suite 250
Southfield, MI 48034
(248) 223-9500

Dated: September 10, 2003

RECEIVED
CENTRAL FAX CENTER

SEP 11 2003

OFFICIAL